<u>REMARKS</u>

The present application was filed on December 20, 2000 with claims 1-19. Claims 1-19 are pending in the present application and claims 1-3, 7, 10-12 and 19 are the pending independent claims.

In the outstanding Office Action dated September 27, 2004, the Examiner: (i) rejected claims 1-19 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,704,705 to Kabal et al. (hereinafter "Kabal").

With regard to the rejection of claims 1-19 under 35 U.S.C. §102(e) as being anticipated by Kabal, Applicants assert that Kabal fails to teach or suggest all of the limitations in independent claims 1-3, 7, 10-12 and 19, for at least the reasons presented below.

It is well-established law that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Applicants assert that the rejection based on Kabal does not meet this basic legal requirement. Support for this assertion follows.

The present invention, for example, as recited in independent claims 1 and 10, recites techniques for embedding additional information in compressed audio data. MDCT coefficients are extracted from the compressed audio data and employed to calculate a frequency component for the compressed audio data. Additional information is embedded in the frequency component obtained in a frequency domain. The frequency component with the embedded additional information is transformed into MDCT coefficients, and compressed audio data is generated using the MDCT coefficients.

Kabal discloses a transform coder for speech and audio signals, in which a discretely represented frequency signal is transmitted within a frequency band. The signal is discretely represented by coefficients at certain frequencies within the band. A codebook of codevectors is provided, where each codevector has an element for each of the certain frequencies. A masking threshold for the frequency signal is obtained, and a distortion measure is obtained for each

codevector in the codebook. The codevector with the smallest distortion measure is selected and an index is transmitted to the selected codevector.

In providing the rejection, the Examiner directs Applicants to portions of Kabal describing the transformation of frames from a time domain into a frequency domain by MDCT, and the production of coefficients representing the frequency spectrum. However, Kabal fails to disclose the <u>extraction of MDCT coefficients</u> from compressed audio data and the <u>employment of MDCT coefficients to calculate a frequency component</u> for the compressed audio data. Additionally, while the Examiner directs Applicants to a portion of Kabal describing a frequency signal discretely represented by coefficients at certain frequencies, Kabal fails to disclose the <u>embedding of additional information in the frequency component</u> obtained in a frequency domain and the <u>transformation of a frequency component having embedded additional information into MDCT coefficients</u>.

Independent claims 2 and 11 recite techniques for updating additional information embedded in compressed audio data. MDCT coefficients are extracted from the compressed audio data and employed to calculate a frequency component for the compressed audio data. Additional information in the frequency component is detected and changed as needed. The frequency component with embedded additional information is transformed into MDCT coefficients, which are used to generate compressed audio data. In addition to the distinctions presented above with regard to independent claims 1 and 10, Kabal also fails to disclose the <u>detection of additional information in the frequency component</u>.

Independent claims 3 and 12 recite techniques for detecting additional information embedded in compressed audio data. MDCT coefficients are extracted from the compressed audio data and employed to calculate a frequency component for the compressed audio data. The additional information in the frequency component is then detected. Independent claims 3 and 12 are patentable over Kabal for at least the reasons presented above with regard to independent claims 1, 2, 10 and 11.

Independent claim 7 recites a method for generating a table that includes a correlation between MDCT coefficients and frequency components. A basis is generated which is used for performing a Fourier transform for a waveform along a time axis. A window function is multiplied

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by a corresponding waveform generated using the basis. An MDCT process is performed for the multiplication result and an MDCT coefficient is calculated. The basis and the MDCT coefficient are correlated.

In providing support for the rejection the Examiner directs Applicants to portions of Kabal describing: a frequency spectrum of an input signal having axes of amplitude and frequency; a window containing new and previous samples of an input signal; the transformation of input frames from time to frequency domain by MDCT; and codevectors in a codebook. However, Kabal fails to disclose a method of generating a table between MDCT coefficients and frequency components. Further, Kabal fails to disclose the multiplication of a window function by a waveform generated using a basis from a Fourier transform. Kabal also fails to disclose the performing of an MDCT process for the multiplication result.

Independent claim 19 recites an electronic watermarking apparatus comprising an information embedding device for embedding additional information in compressed audio data, and a detection device for detecting the additional information from the compressed audio data. The information embedding device includes those elements illustrated above in relation to independent claims 1 and 10. The detection device includes those elements illustrated above in relation to independent claims 2 and 11. Independent claim 19 is patentable over Kabal for at least the reasons presented above with regard to independent claims 1, 2, 10 and 11.

Dependent claims 4-6, 8, 9 and 13-18 are patentable at least by virtue of their dependency from independent claims 1, 7 and 10-12. Dependent claims 4-6, 8, 9 and 13-18 also recite patentable subject matter in their own right.

In view of the above, Applicants believe that claims 1-19 are in condition for allowance, and respectfully request withdrawal of the §102(e) rejection.

Respectfully submitted,

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